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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2007*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-64 and 140-171* is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☒ Claim(s) *141-149,152-166,and 169- 171* is/are allowed.
6)☒ Claim(s) *1-9,14-16,22-26,37,43-53,55,57-59,63,64,140,150,151,167 and 168* is/are rejected.
7)☒ Claim(s) *10-13,17-21,27-36,38-42,54,56,and 60- 62* is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a)☐ All　b)☐ Some * c)☐ None of:
　　　　1.☐ Certified copies of the priority documents have been received.
　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.
　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____ .

DETAILED ACTION

1.   In view of the Appeal Brief filed on 08 November 2007, PROSECUTION IS

HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the

following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply

under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed

by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and

appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth

in 37 CFR 41.20 have been increased since they were previously paid, then appellant

must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by

signing below:

***.

2.   Claims 1-64 and 140-171 are pending. Claims 65-139 have been cancelled.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   **Claims 1-4, 7, 15, 25, 37, 58, 59, 63, and 64** are rejected under 35 U.S.C.

103(a) as being unpatentable over DeMarcken et al (WO 00/46715) in view of Hussey

[US 5,826,269].

As per **Claim 1**.
DeMarcken et al discloses:
querying one or more airline availability information sources for airline availability information, see abstract, page 7, lines 1-28, page 9, line 19 - page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32;
receiving the requested airline availability information from one or more airline availability sources, see page 9, line 19 - page 12, line 3;
caching the received airline availability information, see page 9, line 19 - page 12, line 3;
determining to provide requestors with at least one of real-time airline availability information and cached airline availability information based at least in part on one or more factors associated with one or more of the requestors, the requestor queries, the requested airline availability information, and the airline availability information sources, see abstract, page 7, lines 1-28, page 9, line 19- page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32; and
   providing information to the requestors in accordance with the determining, see

   figure 9.

DeMarcken et al does not disclose receiving queries from requestors for airline availability information;
prioritizing the requestor queries; and
processing the requestor queries in accordance with the associated priorities.

However, Hussey discloses prioritizing requestor queries in association with the given priority [col 2, lines 1-8]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the process of prioritizing requestor queries as disclosed by Hussey into the method of querying information sources of DeMarcken et al since the combination achieves the predictable result of prioritizing queries.

    As per **Claim 2**.
DeMarcken et al further discloses:
monitoring airline availability information traffic between an airline availability source and one or more clients of the airline availability source, see abstract, page 7, lines 1-28, page 9, line 19- page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32; and
    caching at least a portion of the monitored airline availability information, see abstract, page 7, lines 1-28, page 9, line 19 - page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32.

    As per **Claim 3**.
DeMarcken et al further discloses:
proactively generating one or more queries independent of requestor queries, see abstract, page 7, lines 1-28, page 9, line 19- page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32; and
    sending one or more proactively generated queries to an airline availability information source and caching information returned therefrom, see abstract, page 7, lines 1-28, page 9, line 19- page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32.

    As per **Claim 4**.
DeMarcken et al further discloses:
monitoring airline availability information traffic between an airline availability source and one or more clients of the airline availability source, see abstract, page 7, lines 1-28, page 9, line 19- page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32; and
    caching at least a portion of the monitored airline availability information, see abstract, page 7, lines 1-28, page 9, line 19- page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32;
    proactively generating one or more queries independent of requestor queries, see abstract, page 7, lines 1-28, page 9, line 19- page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32; and
    sending one or more proactively generated queries to an airline availability information source and caching information returned therefrom, see abstract, page 7, lines 1-28, page 9, line 19 - page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32.

As per **Claim 7**.
DeMarcken et al further discloses:
proactively generating queries to populate cache, see abstract, page 7, lines 1-28, page 9, line 19 - page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32.

As per **Claim 15**.
DeMarcken et al further discloses:
determining to provide a requestor with one or more of real-time or cached information based in part on one of the following factors:
    age of cached information, see page 13, lines 6-11 and figures 7 & 8;
    time of day, see page 13, lines 6-11 and figures 7 & 8;
    preference for realtime or cached information, see page 13, lines 6-11 and figures 7 & 8;
    nearness to time-to-departure, see page 13, lines 6-11 and figures 7 & 8.

As per **Claim 25**.
DeMarcken et al and Hussey do not further disclose:
caching recently updated information separately from less recently updated information and searching the recently updated cached information when real-time data is sought.
    However, Examiner takes Official Notice that it is old and well known at the time of the invention to store recently updated and less recently information in a cache. It would have been within the knowledge of the skilled artisan to store the information separately, since it has been held that provision of separatability involves only routine skill in the art, *see In re Dulberg, 289 F.2d 522, 523. 129 USPQ 348, 349 (CCPA 1961).* Furthermore, it is well known that a cache is used to answer requests for the most up-to-date information. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of DeMarcken et al to include caching recently updated information separately from less recently updated information and searching the recently updated cached information when real-time data is sought to quickly respond to requests when information has been previously queried.

As per **Claim 37**.
DeMarcken et al further discloses:
sending the one or more proactively generated queries during periods of low information source activity, see page 11, lines 4-7.

As per **Claim 58**.
DeMarcken et al further discloses:
predicting availability status, see page 9, lines 3-9.

As per **Claim 59**.
DeMarcken et al further discloses:
predicting availability status based on prior observed variables, see page 9, lines 3-14.

As per **Claim 63**.
DeMarcken et al disclose:
receiving a first request from a first requestor, querying one or more sources of information for the requested information, see abstract, page 7, lines 1-28, page 9, line 19 - page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32;
receiving the requested information from the source, see page 9, line 19 - page 12, line 3;
caching the received information, see page 9, line 19 - page 12, line 3;
receiving queries from requestors for at least a portion of the information, see abstract, page 7, lines 1-28, page 9, line 19 - page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32;
determining to provide requestors with at least one of real-time information and cached information, see abstract, page 7, lines 1-28, page 9, line 19- page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32; and
providing information to the requestors in accordance with the determining, see

figure 9.

DeMarcken et al does not disclose
prioritizing the requestor queries;
processing the requestor queries in accordance with the associated priorities. However, Hussey discloses prioritizing requestor queries in association with the given priority [col 2, lines 1-8]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the process of prioritizing requestor queries as disclosed by Hussey into the method of querying information sources of DeMarcken et al since the combination achieves the predictable result of prioritizing queries.

As per **Claim 64**.

DeMarcken et al disclose:

a receiving function that causes the computer system to receive request for information form information sources, see abstract, page 7, lines 1-28, page 9, line 19 - page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32;

a query process function that causes the computer system to determine to process a query, at least, with out0of cache or with real-time information, based at least in part on one or more factors associated with one or more of the requestors, the request, the requested information, and the one or more information sources, see abstract, page 7, lines 1-28, page 9, line 19- page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32

a query function that causes the computer system to query the one or more information sources when it determines to process a query with real-time information, see abstract, page 7, lines 1-28, page 9, line 19 - page 12, line 3, page 12, line 32- page 13, line 34, page 15, line 16 – page 16, line 32;

a cache control function that causes the computer system to cache information returned from the one or more information sources, see page 9, line 19 - page 12, line 3;

DeMarcken et al does not disclose a prioritizing function that causes the computer system to prioritize the requests and to process the requests in accordance with the associated priorities.

However, Hussey discloses prioritizing requestor queries in association with the given priority [col 2, lines 1-8]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the process of prioritizing requestor queries as disclosed by Hussey into the method of querying information sources of DeMarcken et al since the combination achieves the predictable result of prioritizing queries.

5.   **Claims 5, 9, 43-53, 55, 57, 167, and 168** are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMarcken et al (WO 00/46715) in view of Hussey [US 5,826,269] as applied to claim 3 above, and further in view of Tock [US 2004/0064570].

As per **Claim 5**.

DeMarcken et al and Hussey do not further disclose:

adding requestor and proactive queries to a query priority queue, proactive queries at a lower priority and processing the requestor queries and the proactively generated queries according to their priorities.

However, Tock discloses performing synch queries to update a cache [Abstract]. Tock further discloses that request queries are performed with a higher priority than synchronization queries [0077]. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to include the process of prioritizing requestor and proactive queries as disclosed by Hussey into the method of querying information sources of DeMarcken et al and Hussey since the combination achieves the predictable result of prioritizing queries.

As per **Claim 9**.
DeMarcken et al and Hussey do not further disclose:
wherein the proactively generating step comprises ordering the proactive queries for processing based on time-to-departures and age associated with cached information.

However, Tock discloses ordering queries [0077]. Further, it is old and well known in the art to update a cache based on age. Tock does not explicitly disclose that the order is based on time-to-departures. However, it would be obvious to try to update a cache based on a parameter with was within the knowledge of one of ordinary skill. In this case, since the cache stores availability information it would be obvious to store information base don departures. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the process of prioritizing requestor and proactive queries as disclosed by Tock into the method of querying information sources of DeMarcken et al and Hussey since the combination achieves the predictable result of prioritizing queries.

As per **Claims 43-51**.
DeMarcken et al and Hussey do not further disclose:
wherein the proactively generating step comprises assigning priority to queries according to an associated market, frequency of flights, frequency of changes associated with the availability of corresponding flights, market importance, nearness of departure time, age of cached data, number of remaining available seats, anticipated increases in travel volume, and type of product or a type of service.

However, Tock discloses assigning priorities to queries as indicated at time of entry [0077]. It would have been within the knowledge of the skilled artisan in the field to assign priorities to queries based on any type of priority assigned by the user. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of DeMarken et al and Hussey to include the method disclosed by Tock including assigning various prioritization parameters to meet the specific needs of the application for a user.

As per **Claims 52 and 53**.
DeMarcken et al and Hussey do not disclose:
assigning lower priority to forms of ground transportation and/or flights that use propeller planes.

However, Tock discloses assigning priorities to queries as indicated at time of entry [0077]. It would have been within the knowledge of the skilled artisan in the field to assign priorities to queries based on any type of priority assigned by the user. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of DeMarken et al and Hussey to include the method disclosed by Tock including assigning various prioritization parameters to meet the specific needs of the application for a user.

As per **Claims 55 and 167**.

DeMarcken et al and Hussey do not disclose:

updating cached airline availability according to multiple priorities.

However, Tock discloses assigning priorities to queries as indicated at time of entry [0077]. It would have been within the knowledge of the skilled artisan in the field to assign priorities to queries based on any type of priority assigned by the user. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of DeMarken et al and Hussey to include the method disclosed by Tock including assigning various prioritization parameters to meet the specific needs of the application for a user.

As per **Claims 57 and 168**.

DeMarcken et al and Hussey do not disclose

prioritizing the cached airline availability information according to departure times;

prioritizing the cached airline availability information according to one or more additional features;

updating cached airline availability according to multiple priorities.

However, Tock discloses assigning priorities to queries as indicated at time of entry [0077]. It would have been within the knowledge of the skilled artisan in the field to assign priorities to queries based on any type of priority assigned by the user. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of DeMarken et al and Hussey to include the method disclosed by Tock including assigning various prioritization parameters to meet the specific needs of the application for a user.

6.   **Claims 6 and 140** are rejected under 35 U.S.C. 103(a) as being unpatentable

over DeMarcken et al (WO 00/46715) in view of Hussey [US 5,826,269] and Tock [US

2004/0064570] as applied to claim 5 above, and further in view of Brezin et al [US

2002/0178161].

As per **Claims 6 and 140**.
DeMarcken et al and Hussey, do not further disclose:
separating a first requestor query into one or more sub-queries; prioritizing the
one or more first requestor sub-queries with respect to one another; placing the one or
more first requestor sub-queries in the query priority queue; separating a second
requestor query into one or more sub-queries; prioritizing the one or more second
requestor sub-queries with respect to one another; and placing the one or more second
requestor sub-queries in the query priority queue, ordering the first requestor sub-
queries with respect to the second requestor sub-queries according to associated times
of receipt, resolving priority disputes between simultaneously received first and second
requestors are processed before lower priority sub-queries of the first and second
requestors.
However, Brezin et al discloses prioritizing sub-queries with respect to one
another [0088]. Furthermore, Tock discloses prioritizing queries with respect to time
[0077]. Therefore, it would have been obvious to one of ordinary skill in the art at the
time of the invention to include the process of prioritizing queries with respect to given
priorities and time of receipt as disclosed by Brezin et al and Tock into the method of
querying information sources of DeMarcken et al and Hussey since the combination
achieves the predictable result of prioritizing queries.

7.   **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over

DeMarcken et al (WO 00/46715) in view of Hussey [US 5,826,269] as applied to claim 3

above, and further in view of Sedlar [US 6,922,708].

As per **Claim 8**.
DeMarcken et al and Hussey do not further disclose:
proactively generating queries to update cached information.
However, Sedlar discloses proactively generating queries to update cached
information [col 29, lines 32-35]. Therefore, it would have been obvious to one of
ordinary skill in the art at the time of the invention to modify the invention of DeMarcken
et al and Hussey to include the method disclosed by Sedlar so that it always reflects
the current state of the files at their original locations [col 29, lines 32-35].

8.   **Claims 14, 23, 24, 150, and 151** are rejected under 35 U.S.C. 103(a) as being

unpatentable over DeMarcken et al (WO 00/46715) in view of Hussey [US 5,826,269]

as applied to claim 1 above, and further in view of Dillon [US 2003/0206554].

        As per **Claims 14, 23, 24, 150, and 151**.
        DeMarcken et al and Hussey do not further disclose:
        receiving a requestor preference for at least one of real-time or cached
information and determining to provide the requestor with at least one of real-time or
cached information based on the requestor preference.
        However, Dillon discloses providing a user a choice of whether to provide real-
time information instead of information from a cache [0025]. Therefore, it would have
been obvious to one of ordinary skill in the art at the time of the invention to modify the
method of DeMarcken et al and Hussey to include receiving a requestor preference for
at least one of real-time or cached information and determining to provide the requestor
with at least one of real-time or cached information based on the requestor preference
so satisfy customer requirements.

9.   **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over

DeMarcken et al (WO 00/46715) in view of Hussey [US 5,826,269] as applied to claim 1

above, and further in view of Theriault et al [US 6,049,821].

        As per **Claim 16**.
        DeMarcken et al and Hussey do not further disclose:
  querying one or more sources through one or more proxies.
        However, Theriault et al discloses querying information sources through a proxy
[Abstract]. Therefore, it would have been obvious to one of ordinary skill in the art at
the time of the invention to modify the method of DeMarcken et al and Hussey to
include the method of Theriault et al to facilitate information retrieval.

10.   **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over

DeMarcken et al (WO 00/46715) in view of Hussey [US 5,826,269] as applied to claim 1

above, and further in view of Jafri et al (5,832,454).

>   As per **Claim 22**.
>   DeMarcken et al does not disclose:
>   Jafri et al ('454) databases with hotel, rental car and airline data as equivalent,
> see figure 2.
>   Therefore, it would have been obvious to one of ordinary skill in the art at the
> time the invention was made to process hotel rental car or any other availability data for
> the benefit of providing full itinerary planning service to the customer.

11.   **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over

DeMarcken et al (WO 00/46715) in view of Hussey [US 5,826,269] as applied to claim 1

above, and further in view of Ahlstrom et al (4,862,357).

>   As per **Claim 26**.
>   DeMarcken et al does not disclose discloses permitting the requestor to specify
> approximate departure times in the requests for airline availability information and
> searching the cache for the requested information.
>   Ahlstrom et al ('357) teaches allowing arrival and departure time ranges for the
> benefit of providing responsive itinerary planning service to the customer, see figure 4a-
> 1 (78, 80, 82).
>   Therefore, it would have been obvious to one of ordinary skill in the art at the
> time the invention was made to permit the requestor to specify approximate departure
> times for the benefit of providing responsive itinerary planning service to the customer

Allowable Subject Matter

8.   **Claims 10-13, 17-21, 27-36, 38-42, 54, 56, 60-62** are objected to as being

dependent upon a rejected base claim.

9.   **Claims 141-149, 152-166, and 169-171** are allowable.

        As per **Claim 141**.
        DeMarcken et al further discloses a storage of time before departure, and a threshold detector for minutes, hours or days, see page 13, lines 6-11 and figure 8.
        The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:
        ordering the proactive queries within buckets at least according to ages of previously cached information data associated with the proactive queries;
        re-bucketing the proactive queries as their associated time-to departures change; and
        selecting a bucket for processing according to the ordering of the buckets, and processing proactive queries within the selected bucket, skipping proactive queries for which information is presently cached and the newer than a predetermined age.

        As per **Claim 145**.
        DeMarcken et al discloses querying one or more sources through one or more proxies, see page 7, lines 9-15.
        The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:
        monitoring operational status of the one or more proxies and selecting proxies for querying based on the monitored operational status.

        As per **Claim 146**.
        DeMarcken et al discloses querying one or more sources through one or more proxies, see page 7, lines 9-15.
        The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:
        monitoring response times of the one or more proxies and selecting proxies for querying based at least on the response times.

        As per **Claim 147**.
        DeMarcken et al discloses querying one or more sources through one or more proxies, see page 7, lines 9-15.
        The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:
        maintaining a list of unsupported suppliers for qhich information is not yet available on the one or more information sources; and
        returning queries for information from the unsupported suppliers without querying an information source.

        As per **Claim 148**.

DeMarcken et al discloses querying one or more sources through one or more proxies, see page 7, lines 9-15.

The prior art of record, specifically DeMarcken et al and Harris et al do not disclose or fairly teach:

maintaining proxy records for available proxies ina proxy queue; and

removing a higher priority proxy record from the proxy queue to process a query.

As per **Claim 149**.

DeMarcken et al discloses querying one or more sources through one or more proxies, see page 7, lines 9-15.

The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

maintaining a proxy queue as part of a query priority queue.

As per **Claim 152**.

DeMarcken et al further discloses separating queries into sub-queries, see page 8, lines 26-31, and further data regarding date/time when the queries are received, see page 10, lines 24-29.

The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

initiating a control thread for a query, whereby the query includes one or more sub=queries;

initiating a worker thread for each sub-query associated with the query;

prioritizing the qorker threads with respect to one another, and

processing the worker threads according to associated priorities.

As per **Claim 153**.

DeMarcken et al further discloses a cache.

The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

sharing flight availability count record between a plurality of flight records stored in a cache.

As per **Claim 154**.

DeMarcken et al further discloses a cache.

The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

associating multiple flight records as married flight records in a cache; and

sharing flight availability count record between at least one of the multiple flight records and another flight record in the cache.

As per **Claim 155**.

DeMarcken et al further discloses a cache.

The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

searching for cached information after waiting a predetermined time for real-time information.

As per **Claim 156**.
DeMarcken et al further discloses a updating a cache.
The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

communicating with at least a portion of the one or more information sources through proxies, whereby the proxies interface with at least a portion of the one or more of the information sources specific codes.

As per **Claim 161**.
DeMarcken et al further discloses a cache.
The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

generating background threads that appear to come from requestors.

As per **Claim 162**.
DeMarcken et al further discloses a cache.
The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

filtering one or more queries out of proactive caching.

As per **Claim 163**.
DeMarcken et al further discloses a cache.
The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

Filtering out queries related to airline flights for which fares are not available.

As per **Claim 164**.
DeMarcken et al further discloses a cache.
The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

Filtering out queries related to flights on unsupported carriers.

As per **Claim 165**.
DeMarcken et al further discloses a cache.
The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

Filtering out queries related to flights that users are not expected to request.

As per **Claim 166**.

DeMarcken et al further discloses a cache.

The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

proactively generating queries independent of requestor queries and assigning priority to the proactively generated queries according to a total number of seats available.

As per **Claim 169**.

DeMarcken et al further discloses:

identifying one or more factors associated with availability status, page 9, lines 9-12.

The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

learning a relationship between historical value for one or more factors and historical values for availability factors, see page 9, lines 13-27;

generating a function according to the learned relationship, see page 9, lines 13-34;

providing new values for the one or more factors to the function, whereby the function outputs predicted values for availability status, see page 9, lines 13-34

As per **Claim 170**.

DeMarcken et al further discloses a cache.

The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

separating and prioritizing sub-queries of a first and second user with one another;

placing the one or more sub-queries in a priority queue and ordering them according to associated times of receipt, resolving priority disputes between simultaneously received queries so that higher priority sub-queries are processed before lower priority sub-queries;

processing the sub-queries according to their associated priorities.

As per **Claim 171**.

DeMarcken et al further discloses a cache.

The prior art of record, specifically DeMarcken et al, Jafri et al, Ahlstrom et al and Harris et al do not disclose or fairly teach:

monoritoring airline availability information traffic between an airline availability information source and one or more clients of the airline availability information source;

caching at least a portion of the monitored airline availability information traffic;

determining a likelihood that information will be received within a period of time by the monitoring; and

generating proactive queries for information not liely to be received within the period of time.

The claims that depend from the above allowed claims are allowable for the same reasons.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHANNON S. SALIARD whose telephone number is (571)272-5587. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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